

NOTE

Blue Pan Traps as a Potential Method for Collecting Stephanidae (Hymenoptera)

ALEXANDRE PIRES AGUIAR AND ANDREY SHARKOV

Department of Entomology, Museum of Biological Diversity, The Ohio State University,
1315 Kinnear Road, Columbus, Ohio 43212-1192 USA

Stephanids are usually rare in collections. However, this may be related to the lack of efficient collecting techniques for the group. Sweeping, Malaise traps, and light traps usually yield a low number of stephanids, even in areas where they are known to be abundant (pers. obs. and pers. comm. with collectors). Neither the literature nor the labels of 3000 museum specimens examined by the senior author, have any record of Stephanidae collected with yellow pan traps, an effective trapping method for many Hymenoptera (Masner 1976, Noyes 1989).

During a collection trip to St. Catherines Island (Georgia, USA), September 18-25, 1996, we set 155 yellow pan traps and 39 blue pan traps (SoloTM party plates and bowls), on ground level, with water/detergent as a collecting medium. The traps were used for three days, in two sites: (1) an open area (oak savanna) with grassy vegetation, surrounded by oak-pine forest (112 yellow, 15 blue), and (2) a shaded area at the edge of oak-pine forest, with many fallen branches and dead trees scattered around (43 yellow, 24 blue). Site 2 was chosen as a probable habitat for Stephanidae, usually found on or around dead standing and fallen trees (Gauld 1995, and pers. obs.). On the first day, three females of *Megischus bicolor* (Westwood) (Stephanidae) were collected in blue pans on site 2. After that, the 15 blue traps from site 1 were transferred to site 2, resulting in a total of 43 yellow and 39

blue pan traps. No stephanids were caught on the second day, and four more female *M. bicolor* were collected in blue pans on the third day.

The fact that all stephanids were collected only in blue traps strongly suggests a preference of that color to yellow, and that the use of blue pan traps can be an effective trapping technique for these insects. This is in agreement with Kirk's (1984) observation that white or blue pan traps work as well as, or better than yellow in attracting predators and parasitoids not associated with foliage. Preference for white and blue was also observed in Encyrtidae and Pompilidae (Weseloh 1986; Berglund 1993), and in females of *Andrena limnanthis* Timberlake (Andrenidae) (Leong & Thorp 1995).

ACKNOWLEDGMENTS

We thank St. Catherines Island Foundation (American Museum of Natural History, New York, NY) for providing funds for research on the island, and Mr. Royce Hayes (St. Catherines Island, GA) for his valuable assistance.

LITERATURE CITED

- Berglund, S. A. 1993. Habitat and status of the spider wasp *Anoplius caviventris* (Hymenoptera, Pompilidae) in Sweden. *Entomologisk Tidskrift* 114(3): 101-105.
- Gauld, I. D. 1995. Stephanidae, pp. 181-184. In: Hanson, P. E. & I. D. Gauld (eds.). *The Hymenoptera of Costa Rica*. Oxford University Press.
- Kirk, W. D. J. 1984. Ecologically selective coloured traps. *Ecological Entomology* 9: 35-41.
- Leong, J. M. and R. W. Thorp. 1995. Pan traps and oligolectic bees: an alternative sampling method

- using the color preferences of specialist bee pollinators. *Abstracts of papers and posters, International Society of Hymenopterists Third Annual Conference, August 12-17, 1995, University of California, Davis, CA*: 17.
- Masner, L. 1976. Yellow pan traps (Moericke traps, Assiettes jaunes). *Proctos* 2(2): 2.
- Noyes, J. S. 1989. A study of five methods of sampling Hymenoptera (Insecta) in a tropical rainforest, with special reference to Parasitica. *Journal of Natural History* 23: 285-298.
- Weseloh, R. M. 1986. Host and microhabitat preferences of forest parasitic Hymenoptera: Inferences from captures on colored sticky panels. *Environmental Entomology* 15(1):64-70.